



T H E H A R R I S P R O D U C T S G R O U P
A L I N C O L N E L E C T R I C C O M P A N Y

4501 Quality Place • Mason, OH 45040 U.S.A Tel: 513-754-2000 Fax: 513-754-6015

TECHNICAL SPECIFICATION SHEET

ISO 9001
 Cert. No. 31598

PHOS BRONZE A WELDING WIRE

NOMINAL COMPOSITION:

Phosphorus	0.10-0.35 %	Tin	4.0-6.0 %
Lead	0.02 % max.	Aluminum	0.01 % max
Copper	Balance	Others	0.50 % max.

PHYSICAL PROPERTIES:

Solidus	1750 f (950°C)	Liquids	1920 f (1050 C)
Yield Strength	21,000 psi	Tensile Strength	58,000 psi
Elongation	35 %	Brinell Hardness	50-90 HB
Specific Gravity	8.86	Thermal Conductivity	40 Btu/sq ft
Electrical Conductivity	15%	Thermal Capacity	.09 Btu/lb if
Electrical Resistivity	69.1 Ohms	Density	.320 lb/cu in

APPLICATION:

Used to weld base metals of steels and cast iron to copper, brass, and bronze. Idea for overlays on shafts, propellers, housings, couplings, bushings, valve seats, pumps, and other surfaces needing a bronze wearing surface. Good corrosion resistant with good ductility.

RECOMMENDED WELDING PARAMETERS:

***GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray transfer**

<u>Wire Diameter</u>	<u>Amps</u>	<u>Volts</u>	<u>Argon (cfh)</u>	<u>Wire Feed ipm</u>
.030	130-140	25-26	25	340-450
.035	140-160	26-27	30	280-400
.045	165-185	27-28	30	200-300
1/16	285-335	28-30	40	150-210

***GTAW (Tig) Parameters (DCSP) ² Electrode negative or ACHF**

<u>Material</u>	<u>2%Thoriated ²</u>	<u>Filler Wire Size</u>	<u>Amps (DC)</u>	<u>Amps (AC)</u>	<u>Gas Cup</u>	<u>Argon(cfh)</u>
1/16"	1/16"	1/16"	100-120	100-120	3/8-1/2	15
3/32"-1/8"	3/32"	3/32"	185-205	165-195	7/16-1/2	15
3/16"	1/8"	3/32"-1/8"	300-350	255-300	7/16-1/2	20
1/2"	3/16"	1/8"	615-640	440-185	1/2	25

SPECIFICATION COMPLIANCE : ANSI/AWS A5.7 & AMSE SFA A5.7 ERCuSn-A (CDA 51800)

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For technical support and product information, visit our web site at www.harrisproductsgroup.com

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WARNING: PROTECT yourself and others. Read and understand this information.

FUMES AND GASES can be hazardous to your health.

ARC RAYS can injure eyes and burn skin.

ELECTRIC SHOCK can KILL.

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheets (MSDS), and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- Do not touch live electrical parts.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety and Health Standards, available from the U.S. Government Office, Washington, DC 20402.

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